

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
3 March 2005 (03.03.2005)

PCT

(10) International Publication Number
WO 2005/019542 A1

(51) International Patent Classification⁷: E03B 3/28,
B01D 5/00

(21) International Application Number:
PCT/AU2004/001130

(22) International Filing Date: 20 August 2004 (20.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003904488 20 August 2003 (20.08.2003) AU

(71) Applicant (for all designated States except US):
SUN2WATER TECHNOLOGIES PTY LIMITED
[AU/AU]; 5 The Ave of the Allies, Tanilba Bay, NSW
2319 (AU).

(72) Inventors; and

(75) Inventors/Applicants (for US only): JONES, Darryl,
John [AU/AU]; 5 The Ave of the Allies, Tanilba Bay,

NSW 2319 (AU). COLLINS, Graeme, Allan [AU/AU];
33 Ferodale Road, Medowie, NSW 2318 (AU). ROYAL,
Tauaiti, Wally [AU/AU]; 12 Newcastle Street, Morrisset,
NSW 2264 (AU).

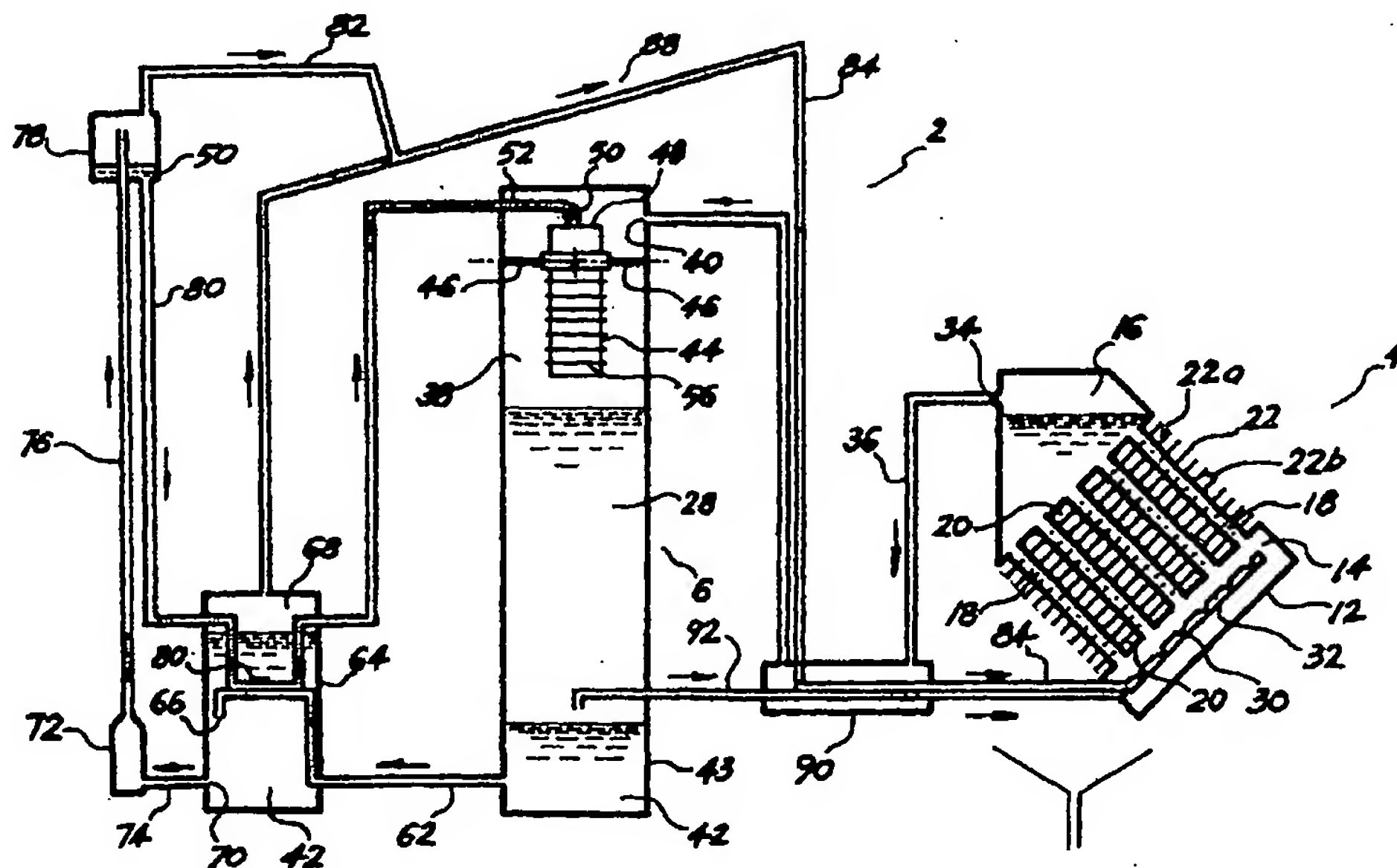
(74) Agent: BLAKE DAWSON WALDRON PATENT SER-
VICES; Level 36, Grosvenor Place, 225 George Street,
Sydney, NSW 2000 (AU).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR CONDENSING WATER FROM AMBIENT AIR



(57) Abstract: There is provided methods and apparatus (2) for collecting water from ambient air. The apparatus has at least one condensation surface which is cooled to, or below, the dew point of the ambient air. The cooling of the condensation surface is effected by utilising a gas to reduce the partial pressure of refrigerant vapour to effect evaporation of liquid refrigerant. Water in ambient air that contacts the cooled condensation surface condenses and is collected. There is also provided apparatus for effecting cooling and/or heating.

BEST AVAILABLE COPY

WO 2005/019542 A1



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— with international search report

BEST AVAILABLE COPY